

U.S. Serial No. 10/652,390
Reply to Office Action of: July 14, 2006
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REMARKS

Applicants have amended Claims 1, 14, 29, 40, 50 and 57 to specify that the oxygenate-containing hydrocarbon stream contains at least 100 wppm oxygenates, measured as oxygen. Support for these amendments can be found in original Claims 7, 20, 43 and 53 for example. The foregoing claims were also amended to emphasize what would be apparent to one skilled in the art: treatment of the reduced catalyst is different from hydrodewaxing or similar processing steps because the treatment is conducted at temperatures lower than that used for hydrodewaxing. Support for this amendment can be found at page 11, lines 4 to 6 and in the examples.

Claims 7, 20, 43, 53 and 60 were cancelled, and the dependencies of Claims 8, 21, 44, 54 and 61 were amended to depend from a non-cancelled claim.

The Examiner rejected Claims 1 to 12 under 35 USC 103(a) as unpatentable over Duprey in view of Borghard. Applicants respectfully request the Examiner to reconsider and withdraw that rejection.

Applicants' Claims 1 to 12 are directed toward an unsulfided hydrodewaxing catalyst that is made by the steps of:

- (1) reducing a Group VIII metal component and a dewaxing component and then
- (2) treating the reduced catalyst with a hydrocarbon stream containing at least 100 wppm oxygenates, as measured oxygen. The treating step is conducted at a temperature below hydrodewaxing process temperatures.

Duprey makes no such disclosure or suggestion. Duprey instead discloses preparing a catalyst by extruding ZSM-12 with a silica binder; treating the extrudate to remove alumina; impregnating the treated extrudate with platinum; calcining and reducing the impregnated extrudate. In Example 4, Duprey discloses using his reduced

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catalyst to hydroisomerize a Fischer-Tropsch (F-T) wax that has been hydrotreated to reduce the oxygen content below 500 ppm, but the contacting of his catalyst with the F-T wax is conducted at hydroisomerizing conditions. Thus, contacting Duprey's reduced but untreated catalyst with an F-T wax under hydroisomerization conditions does not lead to or suggest applicants' catalyst.

Borghard is cited in an attempt to overcome the deficiencies in the primary reference. Borghard, however, fails in this regard. Borghard disclosed steaming a zeolite to lower its acidity, followed by compositing with a binder, impregnating with Pt and calcining. There clearly is no disclosure or suggestion in Borghard of reducing his calcined material followed by treatment with a hydrocarbon stream containing oxygenates.

In view of the foregoing, applicants respectfully request the Examiner to withdraw his rejection of Claims 1 to 12.

Claims 14 to 16, 28, 30 to 63 stand rejected under 35 USC 103(a) as unpatentable over Duprey in view of Borghard. Applicants respectfully traverse this rejection.

As explained above, Duprey teaches dewaxing an F-T wax with a zeolite catalyst that has been calcined and reduced but which has not been treated at temperatures below hydrodewaxing temperatures with a hydrocarbon stream containing at least 100 wppm oxygenates, measured as oxygen. Moreover, applicants' catalyst is particularly suitable for dewaxing hydrocarbons that do not contain high amounts of waxes because they have been produced by a noncobalt Fischer-Tropsch catalyst. Thus, independent Claims 14, 19, 40, 50 and 57 are all directed to a process for hydrodewaxing an F-T wax produced over a noncobalt catalyst. Applicants' examples demonstrate the advantages of use of applicants' catalyst in such a process. In contrast thereto, Duprey

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makes no such suggestion of the significant benefits resulting from dewaxing an F-T wax that is produced over a noncobalt catalyst by using applicants' catalyst. The same comments are equally applicable to Borghard; and in view thereof, the rejection of Claims 14 to 16, 28, 30 to 63 should be withdrawn.

Claim 27 is rejected under 35 USC 103(a) as unpatentable over Duprey in view of Borghard in further view of Ziemer. Applicants respectfully traverse this rejection.

Ziemer is cited as teaching hydrodehazing and hydrofinishing, which teaching fails to overcome the basic deficiencies of the primary references; and hence, this rejection necessarily fails to render Claim 27 unpatentable.

Claim 29 and 64 were rejected under 35 USC 103(a) as unpatentable over Duprey in view of Borghard in further view of Derr. This rejection also is traversed.

Derr discloses using a low H₂/CO ratio syngas to make an F-T wax by using an Fe, Cr, Zn, Cu or K catalyst. Thereafter, the wax is cracked to produce olefins using an acid catalyst. Thus, Derr does not teach hydrodewaxing but teaches cracking, which both Duprey and Borghard seek to avoid. Also, Derr does not produce liquid hydrocarbons in his cracking step. Instead, liquid hydrocarbons are produced by oligomerization of olefins in a separate step. Indeed, because Derr has nothing to do with hydrodewaxing, it appears that the Examiner is merely selecting bits and pieces of Derr totally out of context in an attempt at hindsight reconstruction of applicants' invention. Not only is that improper, but it also fails because there is nothing in Derr to overcome the basic deficiencies of the primary references.

Applicants respectfully request that this rejection be withdrawn.

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Conclusion

Applicants' amendments to the independent claims incorporated features from dependent claims. Additionally, amendments were made to emphasize what should have been quite apparent, viz, a treatment step is different from a hydrodewaxing step. Additionally, applicants have provided a detailed explanation patentably distinguishing applicants' invention over the cited art.

Applicants, therefore, request the Examiner to enter the amendments and pass the case to issue.

Respectfully submitted,



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☒ Pursuant to 37 CFR 1.34(a)

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